

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
19 May 2005 (19.05.2005)

PCT

(10) International Publication Number  
**WO 2005/045499 A1**

(51) International Patent Classification<sup>7</sup>: **G02B 6/42**

(21) International Application Number:  
PCT/IB2004/003674

(22) International Filing Date:  
10 November 2004 (10.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0326106.2 10 November 2003 (10.11.2003) GB  
0408653.4 19 April 2004 (19.04.2004) GB  
0408660.9 19 April 2004 (19.04.2004) GB

(71) Applicant (for all designated States except US):  
**MELEXIS NV** [BE/BE]; Microelectronic Integrated  
Systems, Rozendaalstraat 12, B-8900 Leper (BE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **DE PAUW, Piet**  
[BE/BE]; Meerhem 11/b, B-9700 Oudenaarde (BE).

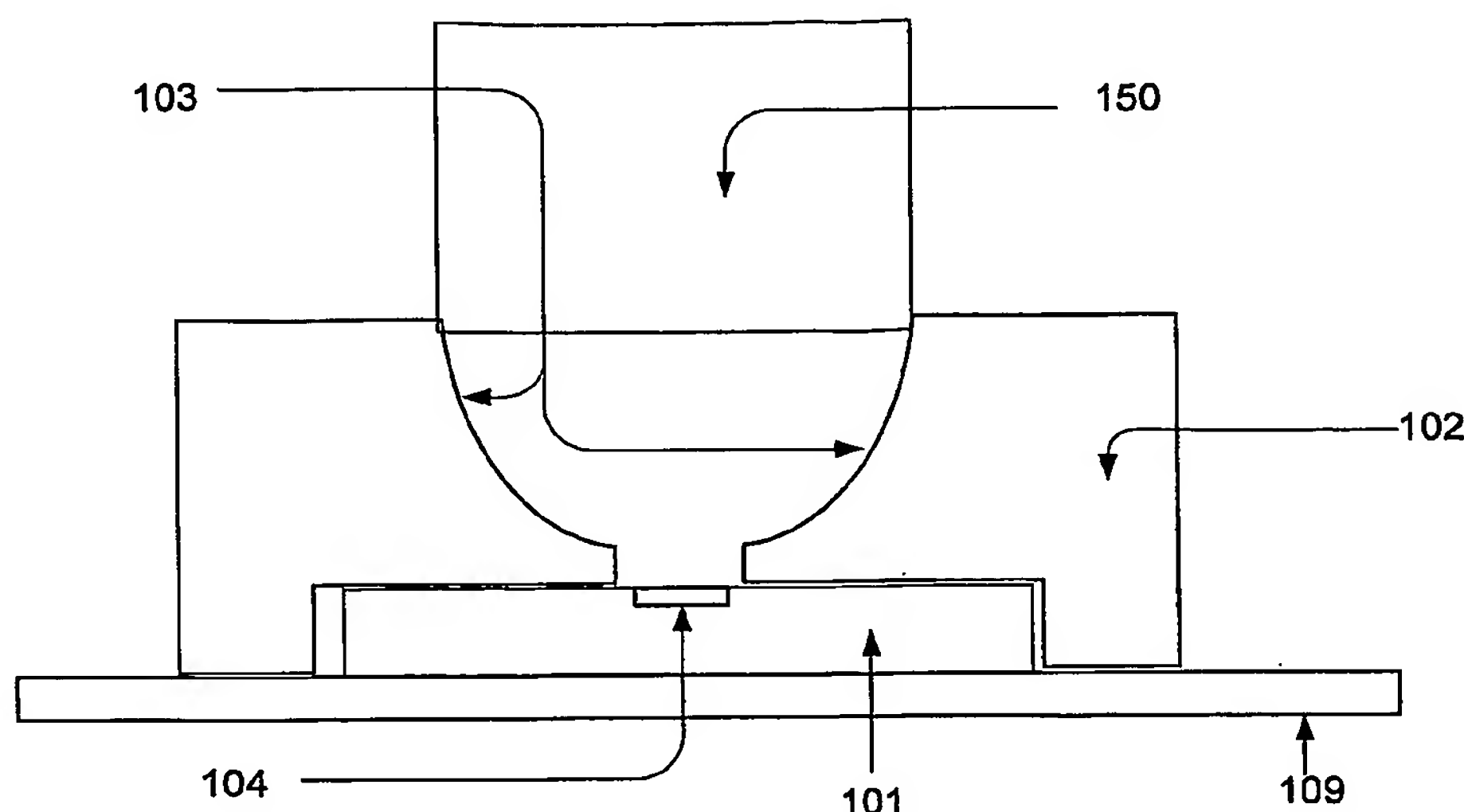
(74) Agents: **CHURCH, Simon** et al.; Wilson Gunn Skerrett,  
Charles House, 148/9 Great Charles Street, Birmingham  
B3 3HT (GB).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE,  
SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: OPTICAL DATA TRANSMISSION, OPTICAL DATA TRANSCEIVERS AND METHOD OF MANUFACTURING  
AND PACKAGING THEREOF



(57) Abstract: An optical data transceiver (100) comprises an integrated circuit (101), having provided on one side thereof a light sensing emitting means (104). A reflecting and receiving means (102), is mounted on the same surface of integrated circuit (101) as the light sensing or emitting means (104). The reflector means is open at both ends and has shaped and reflective internal surfaces (103). The reflecting and receiving means (102) is adapted at one end to receive a Plastic Optical Fibre (POF) (150) into connection therewith and at the other end is aligned with the light sensing or emitting means (104). In this way, the reflecting and receiving means is operable to direct light proceeding from the end of the fibre (150) to the light sensing means (104), or direct light from the light emitting means (104) to the end of the fibre (150), and is further operable to retain the POF (150) in position relative to the light sensing or emitting means (104).



**Published:**

— *with international search report*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*